

## Refine Search

### Search Results -

Terms	Documents
L5 and (titanium adj nitride)	2

Database:

US Pre-Grant Publication Full-Text Database  
 US Patents Full-Text Database  
 US OCR Full-Text Database  
 EPO Abstracts Database  
 JPO Abstracts Database  
 Derwent World Patents Index  
 IBM Technical Disclosure Bulletins

Search:

L7





### Search History

 DATE: Sunday, March 21, 2004    [Printable Copy](#)    [Create Case](#)
**Set Name Query**  
 side by side

**Hit Count Set Name**  
 result set

*DB=USPT; PLUR=YES; OP=ADJ*

<u>L7</u>	L5 and (titanium adj nitride)	2	<u>L7</u>
<u>L6</u>	L5 and l1	0	<u>L6</u>
<u>L5</u>	L4 and (barrier adj metal)	4	<u>L5</u>
<u>L4</u>	(Patterning near2 porous)	33	<u>L4</u>
<u>L3</u>	(Patterning near2 porous) and ((bury or burying) near (pores))	0	<u>L3</u>
<u>L2</u>	L1 and ((bury or burying) near (pores))	0	<u>L2</u>
<u>L1</u>	(CVD) adj (TiN)	382	<u>L1</u>

END OF SEARCH HISTORY

## Hit List

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Search Results - Record(s) 1 through 4 of 4 returned.

☐ 1. Document ID: US 6653206 B2

L5: Entry 1 of 4

File: USPT

Nov 25, 2003

US-PAT-NO: 6653206

DOCUMENT-IDENTIFIER: US 6653206 B2

TITLE: Method and apparatus for processing composite member

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KMC	Draw D
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☐ 2. Document ID: US 6498112 B1

L5: Entry 2 of 4

File: USPT

Dec 24, 2002

US-PAT-NO: 6498112

DOCUMENT-IDENTIFIER: US 6498112 B1

TITLE: Graded oxide caps on low dielectric constant (low K) chemical vapor deposition (CVD) films

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KMC	Draw D
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☐ 3. Document ID: US 6451712 B1

L5: Entry 3 of 4

File: USPT

Sep 17, 2002

US-PAT-NO: 6451712

DOCUMENT-IDENTIFIER: US 6451712 B1

TITLE: Method for forming a porous dielectric material layer in a semiconductor device and device formed

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KMC	Draw D
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☐ 4. Document ID: US 6413879 B1

L5: Entry 4 of 4

File: USPT

Jul 2, 2002

US-PAT-NO: 6413879

DOCUMENT-IDENTIFIER: US 6413879 B1

TITLE: Method for forming an interlayer insulating film, and semiconductor device

Full	Title	Chatter	Front	Review	Classification	Date	Reference	Abstract	Claims	KWAC	Draw. Doc
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Clear	Generate Collection	Print	Fwd Refs	Bkwd Refs	Generate OACS
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Terms	Documents
L4 and (barrier adj metal)	4

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First Hit   Fwd Refs  
End of Result Set

☐ **Generate Collection** **Print**

L5: Entry 4 of 4

File: USPT

Jul 2, 2002

DOCUMENT-IDENTIFIER: US 6413879 B1

TITLE: Method for forming an interlayer insulating film, and semiconductor device

Brief Summary Text (10):

However, the SiOF film is disadvantageous in that an increase in concentration of F in the film leads to a reduction in moisture absorption resistance. The reduced moisture absorption resistance poses a serious problem, because a transistor characteristic and adhesion of an upper barrier metal layer are affected.

Detailed Description Text (33):

Subsequently, as shown in FIG. 2K, a barrier metal TiN film 211 is formed above the damascene trench 208. Accordingly, Cu in the damascene trench 208 can be prevented from being dispersed in an SiO.sub.2 film formed later above the damascene trench 208.

Detailed Description Text (64):

Subsequently, as shown in FIG. 2F, patterning is performed for the porous SiO.sub.2 film 207 to form a damascene trench 208. This damascene trench 208 reaches the SiO.sub.2 film 205 formed below the SiO.sub.2 film 207.

Detailed Description Text (69):

Subsequently, as shown in FIG. 2K, a barrier metal TiN film 211 is formed above the damascene trench 208. Accordingly, Cu in the damascene trench 208 can be prevented from being dispersed in an SiO.sub.2 film later formed above the same.

Detailed Description Text (106):

Subsequently, as shown in FIG. 2K, a barrier metal TiN film 211 is formed above the damascene trench 208. Accordingly, Cu in the damascene trench 208 can be prevented from being dispersed in an SiO.sub.2 film later formed above the damascene trench 208.

Detailed Description Text (145):

Subsequently, as shown in FIG. 2K, a barrier metal TiN film 211 is formed above the damascene trench 208. Accordingly, Cu in the damascene trench 208 can be prevented from being dispersed in an SiO.sub.2 film formed later above the damascene trench 208.

Detailed Description Text (184):

Subsequently, as shown in FIG. 2K, a barrier metal TiN film 211 is formed above the damascene trench 208. Accordingly, Cu in the damascene trench 208 can be prevented from being dispersed in an SiO.sub.2 film formed later above the damascene trench 208.

Detailed Description Text (261):

Subsequently, as shown in FIG. 2K, a barrier metal TiN film 211 is formed above the damascene trench 208. Accordingly, Cu in the damascene trench 208 can be prevented from being dispersed in an SiO.sub.2 film formed later above the same.

## CLAIMS:

17. The method according to claim 1, further comprising the steps of:

forming a damascene trench in said porous SiO.sub.2 film;

forming a side-wall insulating film on a side portion of said damascene trench;

burying a metallic film in said damascene trench; and

forming a barrier metal film on said metallic film.

## Refine Search

### Search Results -

Terms	Documents
L5 and (hydrogen near plasma) and (nitrogen near plasma)	1

Database:

US Pre-Grant Publication Full-Text Database  
 US Patents Full-Text Database  
 US OCR Full-Text Database  
 EPO Abstracts Database  
 JPO Abstracts Database  
 Derwent World Patents Index  
 IBM Technical Disclosure Bulletins

Search:

L6

Refine Search

Recall Text



Clear

Interrupt

### Search History

 DATE: Sunday, March 21, 2004    [Printable Copy](#)    [Create Case](#)

#### Set Name Query

side by side

DB=USPT; PLUR=YES; OP=ADJ

#### Hit Count Set Name

result set

<u>L6</u>	L5 and (hydrogen near plasma) and (nitrogen near plasma)	1	<u>L6</u>
<u>L5</u>	L3 and porous and plasma	116	<u>L5</u>
<u>L4</u>	L3 and (patterning near4 porous)	2	<u>L4</u>
<u>L3</u>	L2 and (titanium adj nitride)	1616	<u>L3</u>
<u>L2</u>	barrier adj metal	4899	<u>L2</u>
<u>L1</u>	barrier near2 metal	9057	<u>L1</u>

END OF SEARCH HISTORY

## Hit List

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Search Results - Record(s) 1 through 1 of 1 returned.

☐ 1. Document ID: US 6645864 B1

L6: Entry 1 of 1

File: USPT

Nov 11, 2003

US-PAT-NO: 6645864

DOCUMENT-IDENTIFIER: US 6645864 B1

TITLE: Physical vapor deposition of an amorphous silicon liner to eliminate resist poisoning

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KMC	Draw. D.
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Clear	Generate Collection	Print	Fwd Refs	Bkwd Refs	Generate OACS
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Terms	Documents
L5 and (hydrogen near plasma) and (nitrogen near plasma)	1

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## Hit List

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Search Results - Record(s) 1 through 2 of 2 returned.

☐ 1. Document ID: US 6653206 B2

L4: Entry 1 of 2

File: USPT

Nov 25, 2003

US-PAT-NO: 6653206

DOCUMENT-IDENTIFIER: US 6653206 B2

TITLE: Method and apparatus for processing composite member

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KMC	Draw De
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☐ 2. Document ID: US 6498112 B1

L4: Entry 2 of 2

File: USPT

Dec 24, 2002

US-PAT-NO: 6498112

DOCUMENT-IDENTIFIER: US 6498112 B1

TITLE: Graded oxide caps on low dielectric constant (low K) chemical vapor deposition (CVD) films

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KMC	Draw De
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Clear	Generate Collection	Print	Fwd Refs	Bkwd Refs	Generate OACS
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Terms	Documents
L3 and (patterning near4 porous)	2

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